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SONY KDL-40NX700 SERVICE MANUAL

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HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

AZ1-H *Chassis*

ORIGINAL MANUAL ISSUE DATE: 1/2010

Version	Date	Subject
1.0	1/21/2010	No revisions or updates
2.0	3/10/2010	Added Safety-Related Warning regarding caution when handling the LCD Panel (Reissue entire manual) Added caution for handling Glass Assembly Added Service Adjustment information for Adjustments After Replacing the BUHS Board or LCD Panel
3.0	3/31/2010	Corrected caution for handling Glass Assembly (Replaced page 4) Corrected Part Number for Rear Cover Assemblies. (Replaced page 13)
4.0	9/20/2010	Reissue entire manual to include the following: Updated Table of Contents. Replaced Page ii. Corrected Section 2-1-1. 'Viewing the Service Menus'. Replaced Page 19. Added Frame Diagram to Section 3 'Diagrams'. Added Page 28.
5.0	9/28/2010	Corrected Model name information on page 9.

LCD Digital Color TV

SONY®

9-888-269-05

Self Diagnosis
Supported model

SERVICE MANUAL

AZ1-H *Chassis*

LCD Digital Color TV

SONY®

9-888-269-05

MODEL LIST

MODEL	COMMANDER	DESTINATION
KDL-40NX700	*RM-YD037*	*US*
KDL-40NX700	*RM-YD052*	*CND*
KDL-40NX700	*RM-YD052*	*MX*
KDL-40NX700	*RM-YD052*	*LATIN AMERICA*

MODEL	COMMANDER	DESTINATION
KDL-46NX700	*RM-YD037*	*US*
KDL-46NX700	*RM-YD052*	*CND*
KDL-46NX700	*RM-YD052*	*MX*
KDL-46NX700	*RM-YD052*	*LATIN AMERICA*

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SPECIFICATIONS

Model name KDL-	46NX700	40NX700
System		
Television system	NTSC: American TV standard ATSC (8VSB terrestrial): ATSC compliant 8VSB QAM on cable: ANSI/SCTE 07 2000 (Does not include CableCARD functionality)	
Channel coverage	Analog terrestrial: 2 - 69 / Digital terrestrial: 2 - 69 Analog Cable: 1 - 135 / Digital Cable: 1 - 135	
Panel system	LCD (Liquid Crystal Display) Panel	
Speaker output	10 W + 10 W	
Input/Output jacks		
CABLE/ANTENNA	75-ohm external terminal for RF inputs	
VIDEO IN 1/2	VIDEO / AUDIO	
COMPONENT IN	YPBPR (Component Video) / Signal format: 480i, 480p, 720p, 1080i, 1080p AUDIO	
HDMI IN 1/2/3/4	HDMI: Video: 480i, 480p, 720p, 1080i, 1080p, 1080/24p Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24 bits, Dolby Digital AUDIO (HDMI IN 2)	
AUDIO OUT	500 mVrms (typical)	
DIGITAL AUDIO OUT (OPTICAL)	PCM/Dolby Digital optical signal	
PC IN	D-sub 15-pin, analog RGB	
PC/HDMI 2 AUDIO IN	Stereo mini jack	
LAN	10BASE-T/100BASE-TX connector (Connection speed may differ depending on the network environment. 10BASE-T/100BASE-TX communication rate and communication quality are not guaranteed for this TV.)*1	
USB/DLNA	Refer to the i-Manual for supported format.	
Power and others		
Power requirement	110-240 V AC, 50/60 Hz (U.S.A./Canada 120 V AC, 60 Hz)	
Power consumption in use	129W	109W
Power consumption in DAM*2	18 W (You may hear a clicking noise during the download but this is normal.)	
Power consumption in standby	Less than 0.17 W with 120 V AC and less than 0.23 W with 240 V AC	Less than 0.13 W with 120 V AC and less than 0.2 W with 240 V AC
Screen size (inches measured diagonally)	46 inches	40 inches
Display resolution	1,920 dots (horizontal) × 1,080 lines (vertical)	
Speaker Full range with speaker box (2) (mm) (inches)	34 × 160 1 3/8 × 6 3/8	
Dimensions with stand (mm)	1,127 × 748 × 320	994 × 673 × 290
Dimensions with stand (inches)	44 3/8 × 29 1/2 × 12 5/8	39 1/4 × 26 1/2 × 11 1/2
Dimensions without stand (mm)	1,127 × 716 × 64	994 × 641 × 64
Dimensions without stand (inches)	44 3/8 × 28 1/4 × 2 5/8	39 1/4 × 25 1/4 × 2 5/8
wall-mount hole pattern (mm)	300 × 300	
wall-mount screw size (mm)	M6 (length: refer to diagram on page 15.)	
Mass with stand (kg)/(lb.)	27.8/61.3	22.6/49.8
Mass without stand (kg)/(lb.	24.0/52.9	19.2/42.3
Supplied accessories	See “Checking the accessories” (page 4).	
Optional accessories	Connecting cables / Support Belt Kit / Wall-Mount Bracket	

*1 For LAN connections, use a Category 7 10BASE-T/100BASE-TX cable (not supplied).
*2 Download Acquisition Mode (DAM) is used for software updates and/or collecting data for TV Guide On Screen.
• Optional accessories availability depends on its stock.
• Design and specifications are subject to change without notice.

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U.S. Patent No. 6,816,141

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Your BRAVIA TV is ENERGY STAR® qualified in the “Home” mode. It meets strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and Department of Energy. ENERGY STAR is a joint program of these government agencies, designed to promote energy efficient products and practices.

Changes to certain features, settings, and functionalities of this TV (i.e. TV Guide, Picture/Sound, Light Sensor, Power Savings) can increase or change the power consumption.

Depending upon such changed settings, the power consumption may exceed the limits required for the ENERGY STAR qualification in the “Home” mode.

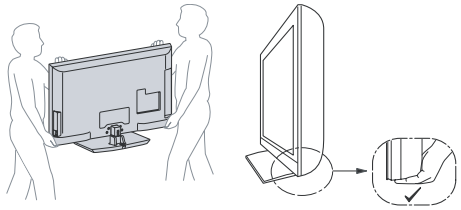
WARNINGS AND CAUTIONS

CAUTION!!

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

CARRYING THE TV

- Carry the TV with the adequate number of people; larger size TVs require two or more people.
- Correct hand placement while carrying the TV is very important for safety and to avoid damage.



WARNING!!

An isolation transformer should be used during any service to avoid possible shock hazard, because of live chassis. The chassis of this receiver is directly connected to the AC power line.

⚠ SAFETY-RELATED COMPONENT WARNING!!

Components identified by shading and ⚠ mark on the exploded views are critical for safe operation.

Replace all components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. It is essential that all critical parts be replaced only with the part number specified in this manual to prevent electric shock, fire, or other hazard.

Circuit adjustments that are critical for safe operation are identified in this manual.

Follow these procedures whenever critical components are replaced or improper operation is suspected.

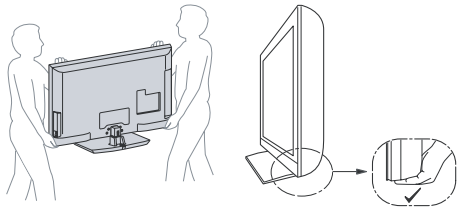
NOTE: Do not modify the original design without obtaining written permission from the manufacturer or you will void the original parts and labor guarantee.

ATTENTION!!

Ces instructions de service sont à l'usage du personnel de service qualifié seulement. Pour prévenir le risque de choc électrique, ne pas faire l'entretien autre que celui contenu dans le Mode d'emploi à moins que vous soyez qualifié faire ainsi.

POUR TRANSPORTER LE TÉLÉVISEUR

- Transportez le téléviseur avec le nombre de personnes approprié ; un téléviseur de grande taille doit être transporté par au moins deux personnes.
- Lors du transport du téléviseur, l'emplacement des mains est très important pour votre sécurité, ainsi que pour éviter de causer des dommages.



ALERTE!!

Afin d'eviter tout risque d'electrocution provenant d'un châssis sous tension, un transformateur d'isolement doit etre utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.

⚠ ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifies par une trame et par une marque ! sur les schemas de principe, les vues explosees et les listes de pieces sont d'une importance critique pour la securite du fonctionnement. Ne les remplacer que par des composants Sony dont le numero de piece est indique dans le present manuel ou dans des supplements publies par Sony. Les reglages de circuit dont l'importance est critique pour la securite du fonctionnement sont identifies dans le present manuel. Suivre ces procedures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

HANDLING THE GLASS ASSEMBLY

Use the following precautionary guidelines when replacing the Glass Assembly to avoid material degradation or screen coating degradation, and ensure that dust, dirt, or fingerprints are not left between the glass and the LCD Panel.

- ☑ Replace the Glass Assembly in a brightly lit and clean room.
- ☑ Place the replacement Glass Assembly on a dark cloth to make it easier to see dust and dirt particles.
- ☑ Wear anti static gloves to avoid leaving finger prints on the glass.
- ☑ Use a dry, soft MicroFiber cloth, such as a lint free polishing cloth, to gently wipe the glass to remove any dust or dirt particles.
- ☑ If the glass needs additional cleaning, slightly moisten the cloth with a diluted mild soap or mild detergent solution, or use a compressed air duster (spray can type).
- ☑ After replacing the Glass Assembly, verify there are no dark spots or finger prints visible on the screen.

CAUTION:

- ⦸ **Do Not** use paper towels, any type of abrasive pad, rags, rubber or vinyl materials to clean the screen. Using these materials could easily scratch the screen which may result in permanent damage.
- ⦸ **Do Not** use any cleaning product containing alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, ammonia, benzene, thinner or insecticide. Using any of these harsh cleaners may result in permanent damage to the screen.
- ⦸ **Do Not** spray water or detergent directly onto the TV screen . If liquid drips into the bottom of the screen it may cause a failure.

SAFETY-RELATED WARNING

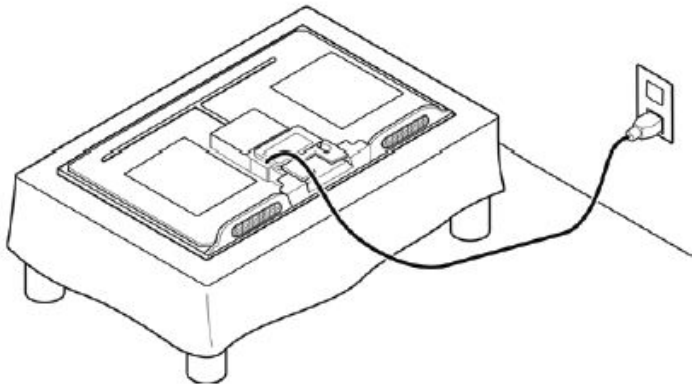
USE CAUTION WHEN HANDLING THE LCD PANEL

When repairing the LCD Panel, be sure you are grounded by using a wrist band.

When installing the LCD Panel on a wall, the LCD Panel must be secured using the 4 mounting holes on the rear cover.

1) Do not press on the panel or frame edge to avoid the risk of electric shock.
2) Do not scratch or press on the panel with any sharp objects.
3) Do not leave the module in high temperatures or in areas of high humidity for an extended period of time.
4) Do not expose the LCD Panel to direct sunlight.
5) Avoid contact with water. It may cause a short circuit within the module.
6) Disconnect the AC power when replacing the backlight (CCFL) or inverter circuit.

   (High voltage occurs at the inverter circuit at 650Vrms.)
7) Always clean the LCD Panel with a soft cloth material.
8) Use care when handling the wires or connectors of the inverter circuit. Damaging the wires may cause a short.
9) Protect the panel from ESD to avoid damaging the electronic circuit (C-MOS).
10) During the repair, DO NOT leave the Power On for more than 1 hour while the TV is face down on a cloth.



SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

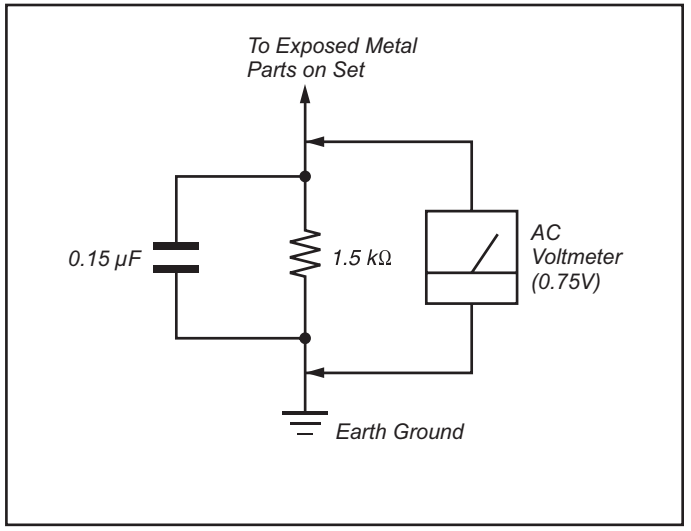


Figure A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA(500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.

2. A battery-operated AC milliampmeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale.

   The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground.

If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms.

If a cold-water pipe is not accessible, connect a 60-to 100-watt trouble-light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

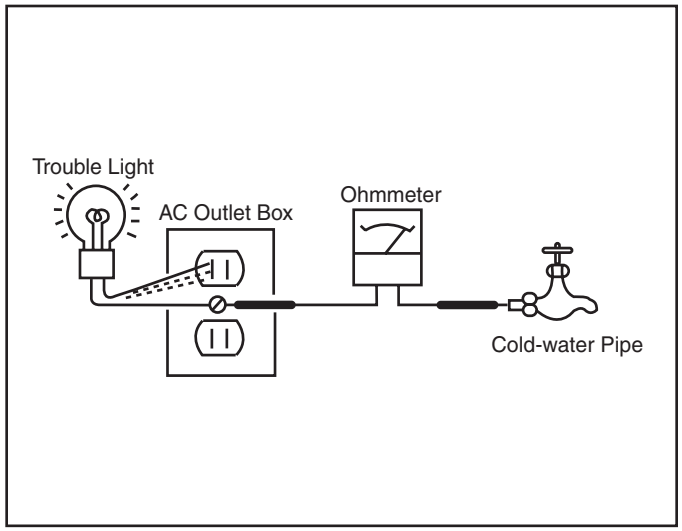


Figure B. Checking for earth ground.

SELF DIAGNOSIS FUNCTIONS

Self Diagnosis Supported model

SELF DIAGNOSIS FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the remote commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

DIAGNOSTIC TEST INDICATORS

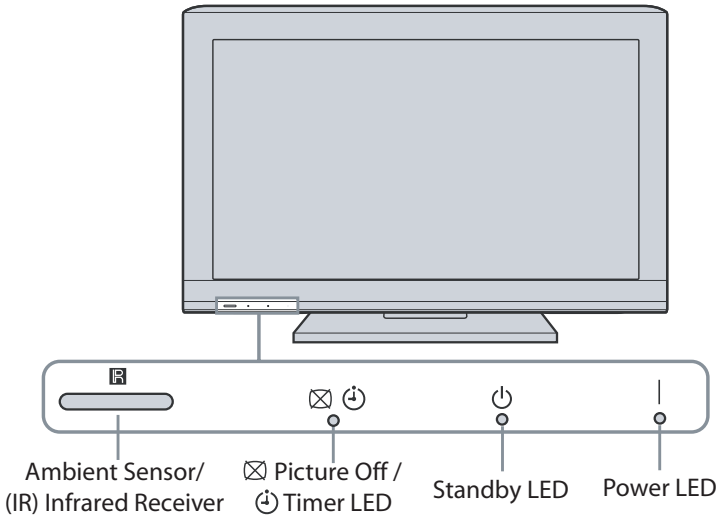
When an error occurs, the STANDBY LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

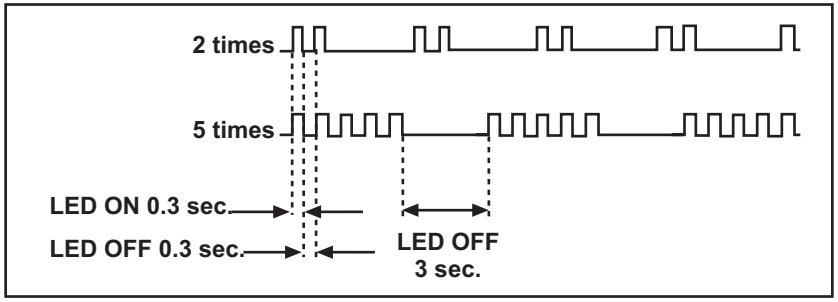
Result for all of the following diagnostic items are displayed on screen.

If the screen displays a "0", no error has occurred .

Diagnostic Item	Diagnostic Item Description	Number of times Standby LED blinks	Possible Location
MAIN_POWER	Main Power Over Voltage Protection	2	BUHS Board GE3A (Power) Board (KDL-40NX700 Only) GE2B (Power) Board (KDL-46NX700 Only)
DC_ALERT	DC Alert	3	BUHS Board GE3A (Power) Board (KDL-40NX700 Only) GE2B (Power) Board (KDL-46NX700 Only)
DTT-WDT	DTT Error		
AUD_PROT	Audio Error Detection		
BALANCER	Panel Balancer Error	4	BUHS Board
TCON ERR	TCON Error	5	BUHS Board LCD Panel TCON Control MT Board
HFR ERR	HFR Error		
P_ID_ERR	Panel ID NVM Error		
BACKLITE	Backlight Error	6	BUHS Board LCD Panel
TEMP_ERR	Temperature Error	7	BUHS Board
FAN_ERR	Fan Error (Not Used in these models)	NA	NA
RGB_SEN	RGB Sensor ACK Error	NA	NA

STANDBY LED FLASH COUNT





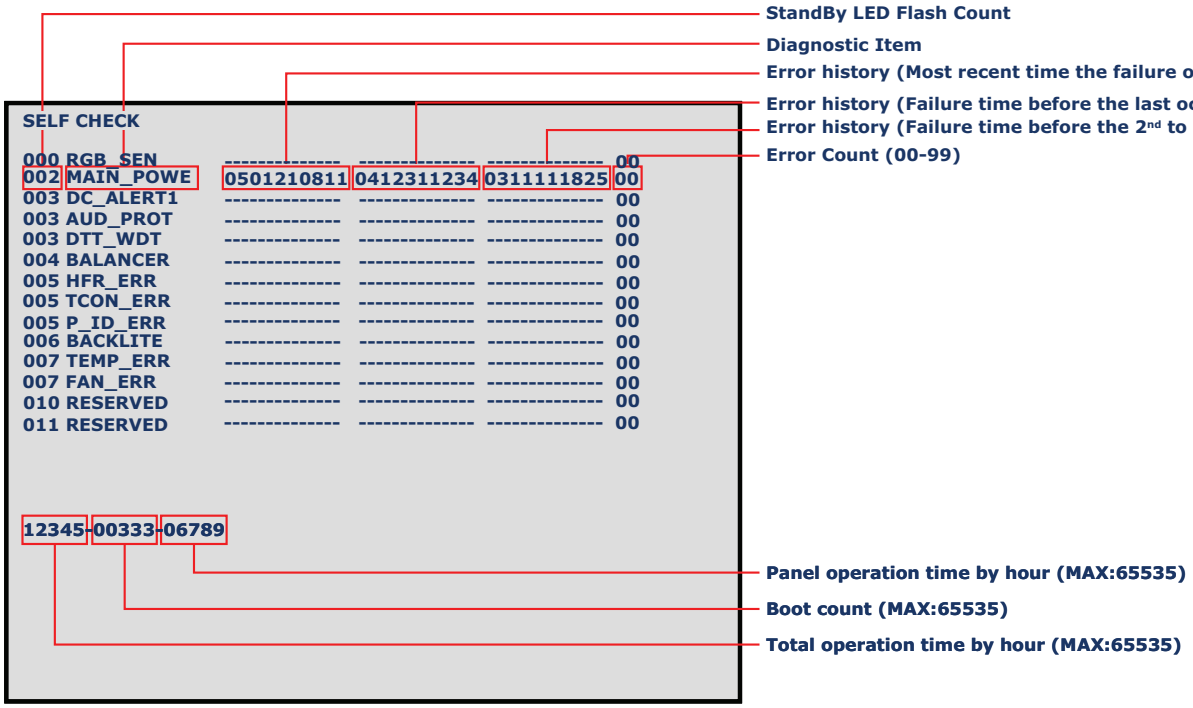
VIEWING THE SELF CHECK DIAGNOSTIC LIST

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of a failure for confirmation on the Self Check diagnostic screen:

1. TV must be in standby mode. (Power off).
2. Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel **5** → Volume **-** → **POWER**.

* NOTE: This differs from accessing Service Adjustments Mode (Volume +)


StandBy LED Flash Count
Diagnostic Item
Error history (Most recent time the failure occurred)
Error history (Failure time before the last occurrence)
Error history (Failure time before the 2nd to last occurrence)
Error Count (00-99)
SELF CHECK
000 RGB_SEN ---------- ---------- ---------- 00
002 MAIN_POWE 0501210811 0412311234 0311111825 00
003 DC_ALERT1 ---------- ---------- ---------- 00
003 AUD_PROT ---------- ---------- ---------- 00
003 DTT_WDT ---------- ---------- ---------- 00
004 BALANCER ---------- ---------- ---------- 00
005 HFR_ERR ---------- ---------- ---------- 00
005 TCON_ERR ---------- ---------- ---------- 00
005 P_ID_ERR ---------- ---------- ---------- 00
006 BACKLITE ---------- ---------- ---------- 00
007 TEMP_ERR ---------- ---------- ---------- 00
007 FAN_ERR ---------- ---------- ---------- 00
010 RESERVED ---------- ---------- ---------- 00
011 RESERVED ---------- ---------- ---------- 00
12345-00333-06789
Panel operation time by hour (MAX:65535)
Boot count (MAX:65535)
Total operation time by hour (MAX:65535)

CLEARING THE SELF CHECK DIAGNOSTIC LIST

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen after you have completed the repairs to be sure you have cleared the result display to “0”.

1. To clear the Error history and Error count: Press the Channel **8** ➡ Channel **0**.
2. To clear the Panel operation time: Press the Channel **7** ➡ Channel **0**.

EXITING THE SELF CHECK DIAGNOSTIC SCREEN

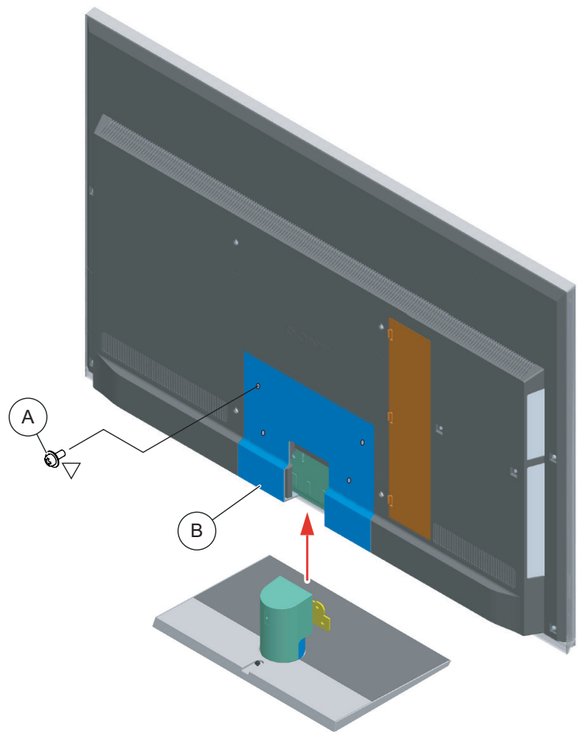
1. To exit the Self Diagnostic screen, turn off the power to the TV by pressing the POWER button on the remote or the POWER button on the TV.

SEC 1. DISASSEMBLY/PART NUMBER INFORMATION

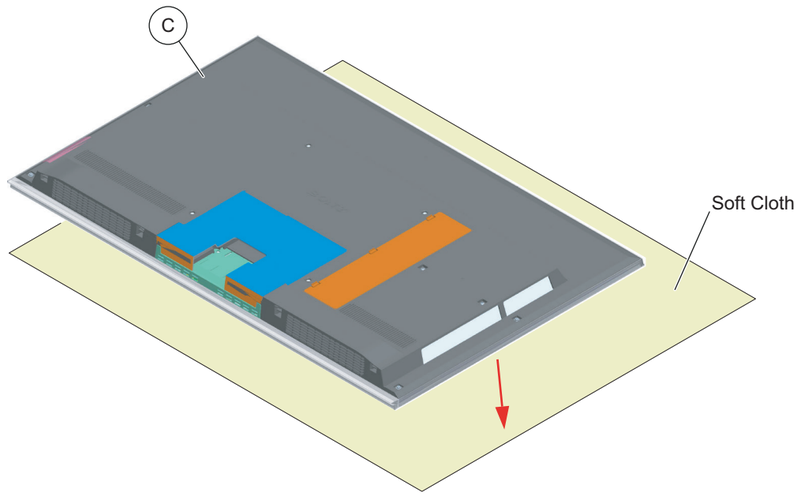
1-1. TABLE-TOP STAND ASSEMBLY REMOVAL

Ⓐ Remove 4 screws from Table-Top Stand Assembly

Ⓑ Lift up TV set to detach from Table-Top Stand Assembly



Ⓒ Gently place the TV set face down onto a soft cloth



Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

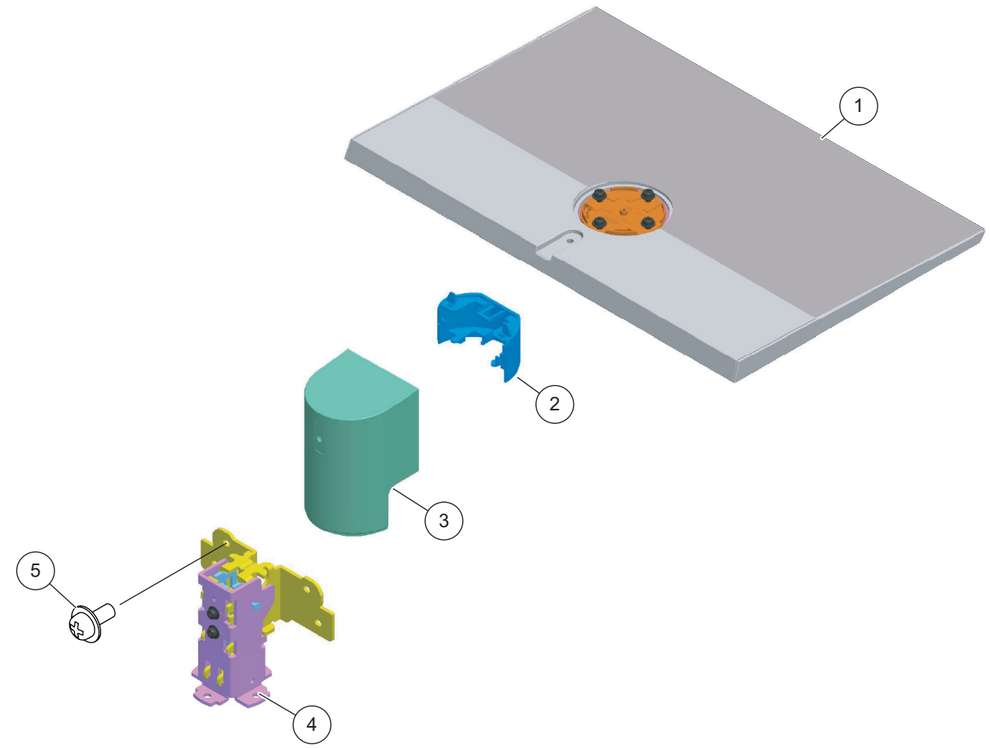
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced.
See Appendix A: Encryption Key Components in the back of this manual.

(Check the Sony Electronics Service Information website for any additional service related issues for this model.)

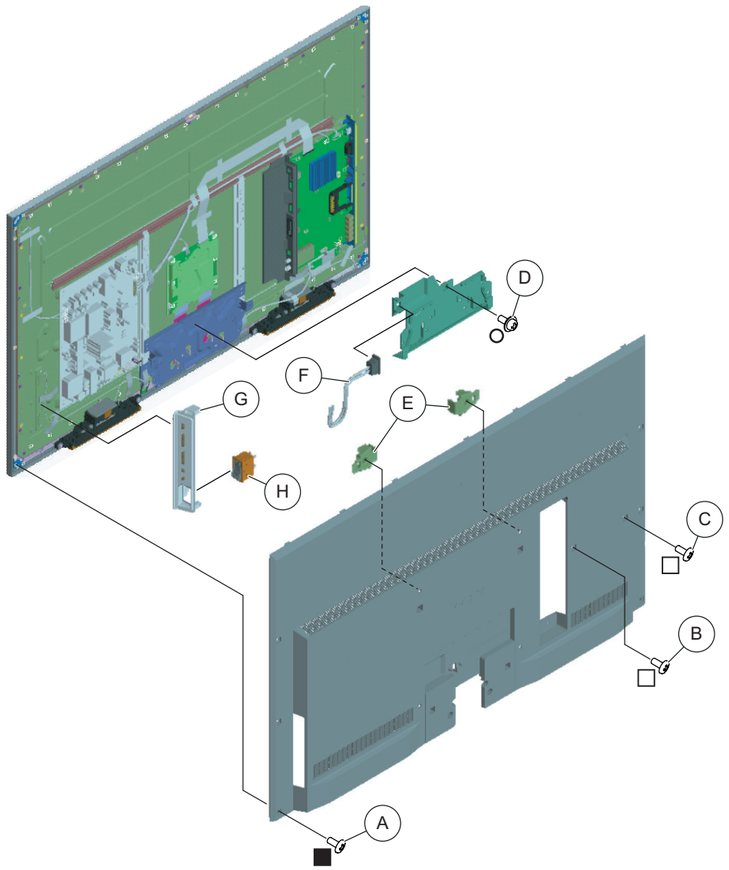


REF. NO.	PART NO.	DESCRIPTION [ASSEMBLY INCLUDES]
1	X-2546-759-1	BASE (L1) ASSEMBLY (GM) (KDL-46NX700 ONLY))
1	X-2546-758-1	BASE (ML1) ASSEMBLY (GM) (KDL-40NX700 ONLY))
2	4-170-474-21	COVER, NECK (ML1 FRONT)
3	4-170-481-21	COVER, NECK (ML1 REAR)
4	4-170-445-01	NECK (ML1)

REF. NO.	PART NO.	DESCRIPTION [ASSEMBLY INCLUDES]
5	2-580-608-01	SCREW, +PSW M5X16 (SCREWS TO ATTACH TABLE-TOP STAND TO LCD TV) For product protection and safety reasons, Sony strongly recommends that you use the screws provided with the TV CAUTION: These screws cannot be used to secure the TV to the Wall Mount Brackets
▽	2-580-608-01	SCREW, +PSW M5X16

1-2. REAR COVER, VESA BRACKETS, SWITCH UNIT AND POWER SWITCH REMOVAL

Ⓐ Remove screws from Rear Cover.
8 from (KDL-40NX700 ONLY).
10 from (KDL-46NX700 ONLY).
Ⓑ Remove 1 screw from Terminal position.
Ⓒ Remove 1 screw from Side Jack position.
Ⓓ Remove 4 screws from Under Cover to detach from Bottom Frame.
Ⓔ Slide Vesa Bracket (S) sideways to remove from Rear Cover.
Ⓕ Lift AC Inlet to remove from Under Cover.
Ⓖ Lift up Switch Unit and disconnect 1 connector to remove from Bezel.
Ⓗ Slide out Power Switch and disconnect 1 connector to remove from Switch Unit.

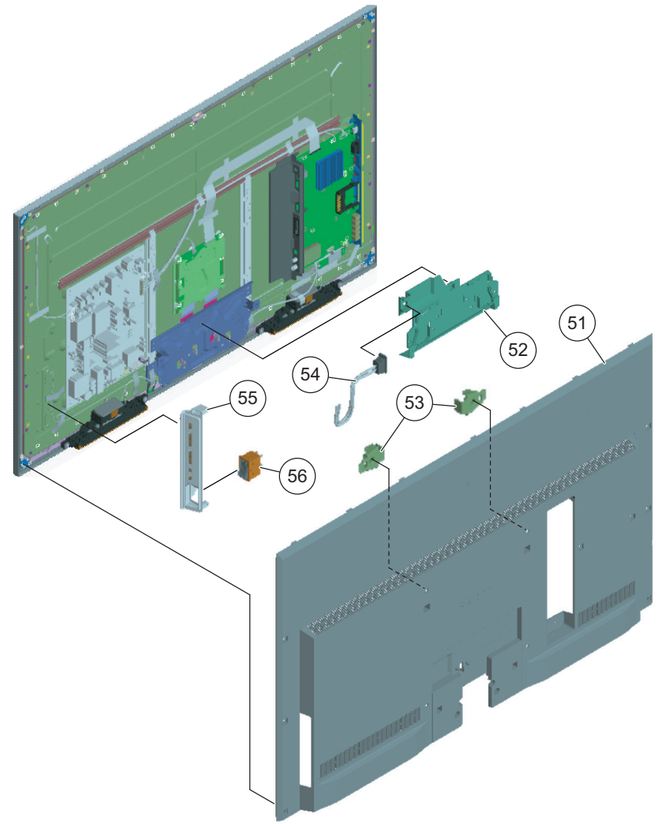


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced.
See Appendix A: Encryption Key Components in the back of this manual.

(Check the Sony Electronics Service Information website for any additional service related issues for this model.)

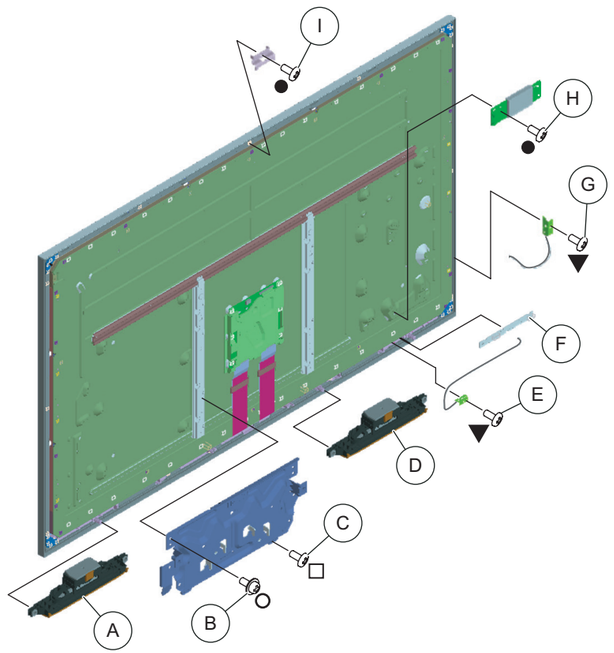


REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
51	X-2546-727-1	REAR COVER(40) ASSEMBLY (KDL-40NX700 ONLY)	
51	X-2546-730-1	REAR COVER (46) ASSEMBLY (KDL-46NX700 ONLY)	
52	4-170-646-01	COVER, UNDER	

REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
53	4-168-272-01	BRACKET,VESA(S)	
⚠ 54	1-842-031-11	AC INLET (2P)	
55	1-487-804-11	SWITCH UNIT	
56	1-798-309-11	POWER SWITCH	
■	2-580-603-01	SCREW, +PSW M4X16	
□	2-580-639-01	SCREW, +BVTP 4X12 TYPE2 IT-3	
○	4-159-298-01	SCREW, +PSW M4X10	

1-3. SPEAKERS, HLR BOARD, WIFI CARD, ANTENNAS AND PANEL HOLDER REMOVAL

Ⓐ Lift up right-side Speaker to remove from Bezel.
Ⓑ Remove 1 screw from Bottom Frame to detach from Panel.
Ⓒ Remove 2 screws from Bottom Frame to detach from Bezel.
Ⓓ Lift up left-side Speaker to remove from Bezel.
Ⓔ Remove 1 screw from Antenna to detach from Bezel bottom.
Ⓕ Disconnect 1 connector from HLR Board and release from LED Guide.
Ⓖ Remove 1 screw from Antenna to detach from Bezel side.
Ⓗ Remove 2 screws from WIFI Card to detach from Panel.
Ⓘ Remove 1 screw from Panel Support to detach from Bezel.

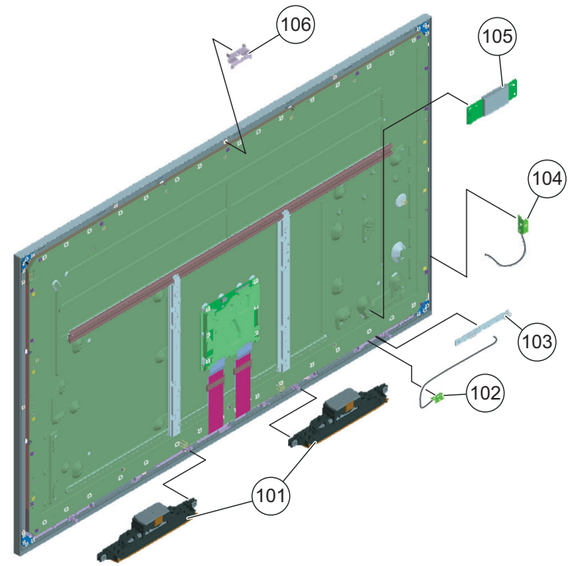


NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced.
See Appendix A: Encryption Key Components in the back of this manual.

(Check the Sony Electronics Service Information website for any additional service related issues for this model.)



REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
101	1-858-379-11	LOUDSPEAKER	
102	1-754-692-21	ANTENNA	
103	A-1744-407-A	HLR BOARD, MOUNTED	
104	1-754-692-11	ANTENNA	
105	1-487-819-11	CARD, WIRELESS LAN	
106	4-165-971-01	HOLDER, PANEL (S)	

REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
□	2-580-639-01	SCREW, +BVTP 4X12 TYPE2 IT-3	
▼	2-345-219-11	+B IB 3X-- CM3	
●	2-580-592-01	SCREW, +PSW M3X8	
○	4-159-298-01	SCREW, +PSW M4X10	

1-4. GE3A/GE2B (POWER) BOARDS, BUHS BOARD, AND LCD PANEL REMOVAL

Ⓐ Remove screws from Power Boards.

4 from GE3A Board (KDL-40NX700 ONLY)

5 from GE2B Board (KDL-46NX700 ONLY)

Ⓑ Disconnect 5 connectors from Power Boards.

Ⓒ Slide Terminal Bracket to left-side to remove from BUHS Board.

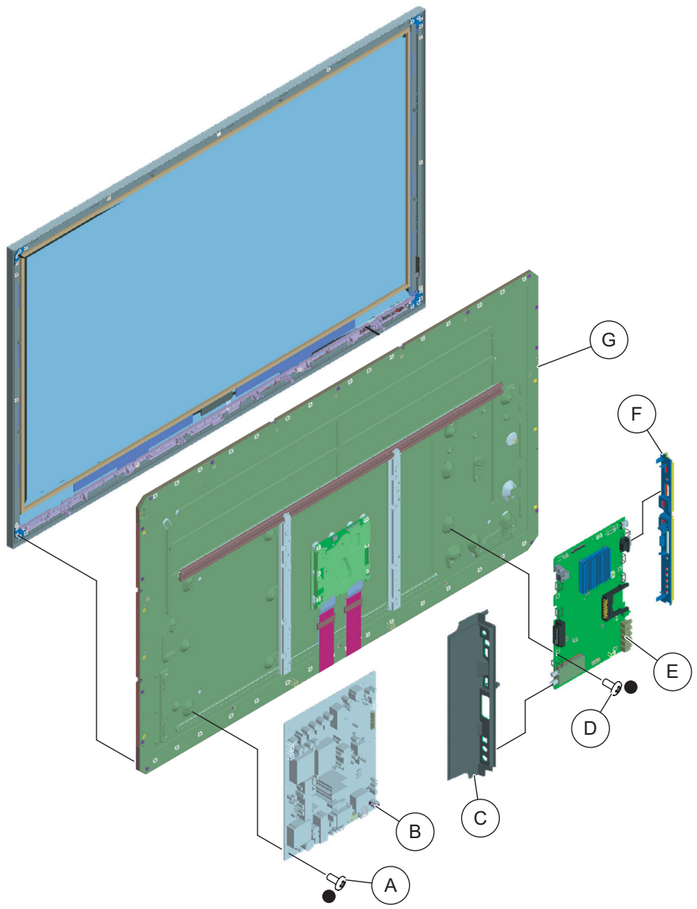
Ⓓ Remove 8 screws from BUHS Board.

Ⓔ Disconnect 5 connectors from BUHS Board.

Ⓕ Slide Side Jack Bracket to right-side to remove from BUHS Board.

Ⓖ Carefully Lift up Panel to remove from Bezel.

CAUTION: Refer to page 4, Handling the Glass Assembly, for cautions regarding replacing the Glass Assembly.



NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

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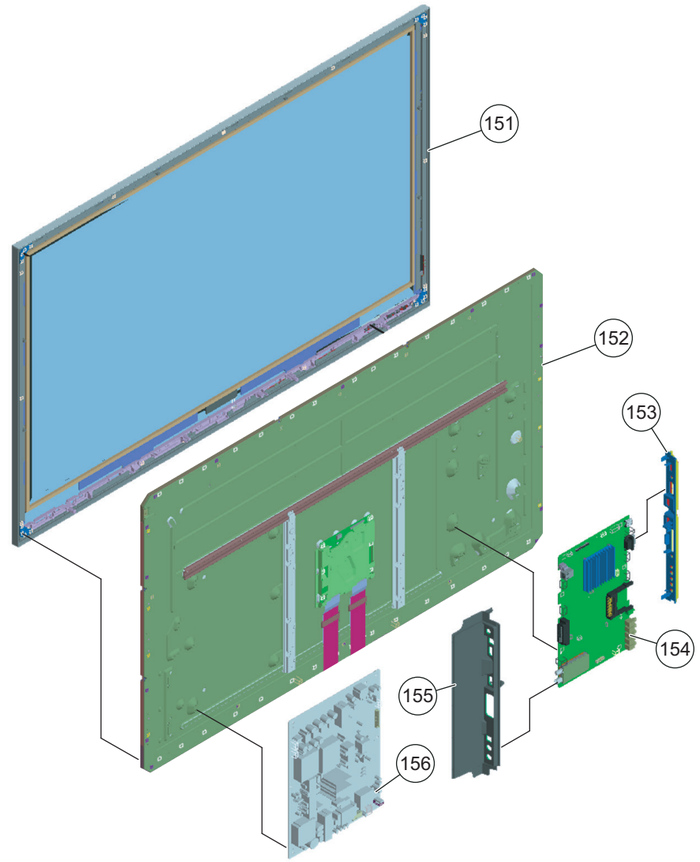
(Check the Sony Electronics Service Information website for any additional service related issues for this model.)



REF. NO.	PART NO.	DESCRIPTION [ASSEMBLY INCLUDES]
151	A-1773-991-A	GLASS (40MAR) ASSEMBLY (KDL-40NX700 ONLY)
151	A-1773-992-A	GLASS (46MAR) ASSEMBLY (KDL-46NX700 ONLY)
152	N/A	LCD PANEL FOR ALL LCD PANEL PART NUMBER INFORMATION REFER TO THE LCD PANELS SERVICE MANUAL
153	X-2547-018-1	BRACKET, SIDE JACK T ASSEMBLY
🔒 154	A-1765-668-A	BUHS BOARD, COMPLETE
		NOTE: For BUHS Board replacement, please refer to section 2-2. Setting the Destination after Replacing the BUHS Board or LCD Panel.

REF. NO.	PART NO.	DESCRIPTION [ASSEMBLY INCLUDES]
		NOTE: Final software is not installed on this BUHS Board. Install the update after replacing this board using the instructions provided with the software.
155	4-172-021-21	BRACKET, TERMINAL T (for US/CND MODELS ONLY)
155	4-172-021-51	BRACKET, TERMINAL T (for MX/LA MODELS ONLY)
156	1-474-213-11	GE3A (POWER) BOARD, COMPLETE (KDL-40NX700 ONLY)
156	1-474-212-11	GE2B (POWER) BOARD, COMPLETE (KDL-46NX700 ONLY)
●	2-580-592-01	SCREW, +PSW M3X8

1-5. CLEANING THE LCD PANEL

CAUTION: When cleaning the TV, be sure to unplug the power cord to avoid any chance of electric shock.

Clean the cabinet of the TV with a dry soft cloth.

Wipe the LCD screen gently with a soft cloth.

- Stubborn stains may be removed with a cloth slightly moistened with a solution of mild soap and warm water.
- If using a chemically pretreated cloth, please follow the instruction provided on the package.
- Never use strong solvents such as a thinner, alcohol or benzine for cleaning.
- Periodic vacuuming of the ventilation openings is recommended to ensure the proper ventilation.

1-6. SCREW LEGEND

KDL-40NX700

	P/N	DESCRIPTION	REMARKS	TOTAL
■	2-580-603-01	SCREW, +PSW M4X16	RC(8)	8
□	2-580-639-01	SCREW, +BVTP 4X12 TYPE2 IT-3	RC to SIDE JACK(1), RC to TRMNL AREA(1), BTM FRM to BEZ ASSY(2)	4
▼	2-345-219-11	+B IB 3X-- CM3	WIFI ANTENNA(2)	2
▽	2-580-608-01	SCREW, +PSW M5X16	TABLE-TOP STAND(4)	4
●	2-580-592-01	SCREW, +PSW M3X8	BUHS(8), GE3(4), WIFI CARD to PNL(2), PNL SUPPORT(1)	15
○	4-159-298-01	SCREW, +PSW M4X10	UC to BTM FRM(4), BTM FRM to PNL(1)	5

KDL-46NX700

	P/N	DESCRIPTION	REMARKS	TOTAL
■	2-580-603-01	SCREW, +PSW M4X16	RC(10)	10
□	2-580-639-01	SCREW, +BVTP 4X12 TYPE2 IT-3	RC to SIDE JACK(1), RC to TRMNL AREA(1), BTM FRM to BEZ ASSY(2)	4
▼	2-345-219-11	+B IB 3X-- CM3	WIFI ANTENNA(2)	2
▽	2-580-608-01	SCREW, +PSW M5X16	TABLE-TOP STAND(4)	4
●	2-580-592-01	SCREW, +PSW M3X8	BUHS(8), GE2-B(5), WIFI CARD to PNL(2), PNL SUPPORT(1)	16
○	4-159-298-01	SCREW, +PSW M4X10	UC to BTM FRM(4), BTM FRM to PNL(1)	5

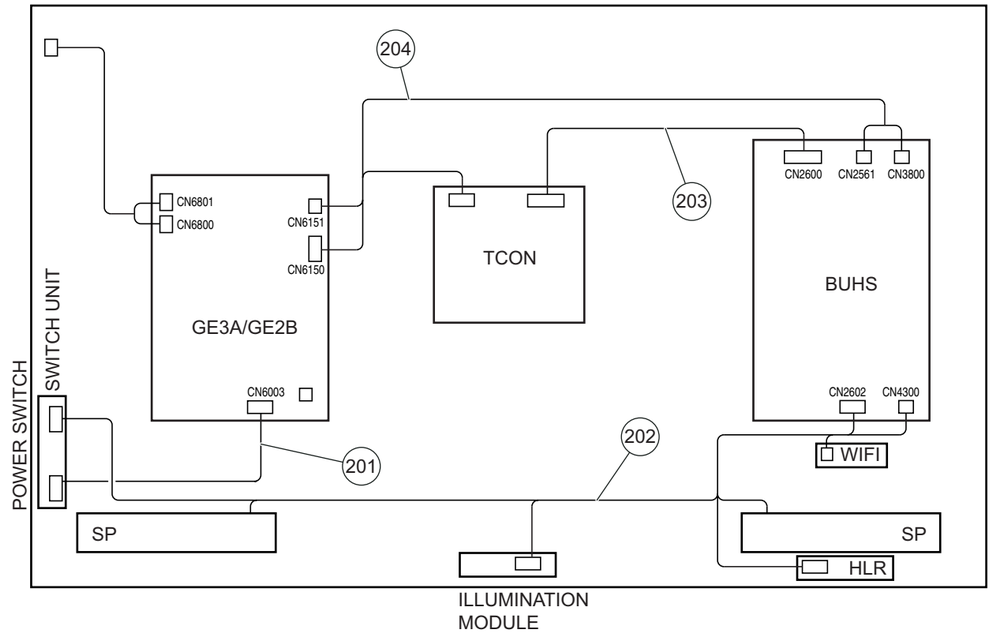
NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

NOTE: The components identified by a red outline and a 🔒 mark contain confidential information. Specific instructions must be adhered to whenever these components are repaired and/or replaced.
See Appendix A: Encryption Key Components in the back of this manual.

(Check the Sony Electronics Service Information website for any additional service related issues for this model.)

1-7. CONNECTORS



	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
	201	1-837-665-12	CONNECTOR ASSEMBLY	(KDL-40NX700 ONLY)
	201	1-837-666-12	CONNECTOR ASSEMBLY	(KDL-46NX700 ONLY)
*	202	1-910-100-00	HARNESS ASSEMBLY (1)	(KDL-40NX700 ONLY)
*	202	1-910-100-01	HARNESS ASSEMBLY (1)	(KDL-46NX700 ONLY)

	REF. NO.	PART NO.	DESCRIPTION	[ASSEMBLY INCLUDES]
*	203	1-837-671-11	(LVDS) FLEXIBLE FLAT CABLE 51P	(KDL-40NX700 ONLY)
*	203	1-837-670-11	(LVDS) FLEXIBLE FLAT CABLE 51P	(KDL-46NX700 ONLY)
*	204	1-910-100-28	HARNESS ASSEMBLY (2)	(KDL-40NX700 ONLY)
*	204	1-910-100-29	HARNESS ASSEMBLY (2)	(KDL-46NX700 ONLY)

1-8. ACCESSORIES AND PACKING

	3-299-071-03	FLYER, SAFETY
	4-178-676-14	MANUAL, INSTRUCTION (ENGLISH VERSION)
	4-178-676-23	MANUAL, INSTRUCTION (FRENCH VERSION)
	4-178-676-33	MANUAL, INSTRUCTION (SPANISH VERSION)
⚠	1-837-644-11	POWER-SUPPLY CORD SET
*	4-180-034-11	SUPPLEMENT(STAND INSTALLATION)

1-9. MISCELLANEOUS

X-2348-140-3	SUPPORT BELT KIT
7-685-648-79	SCREW, +BVTP 3X12 TYPE2 IT-3
7-632-452-24	TAPE (NO.303) 18MMX35M YEL

1-10. REMOTE COMMANDER

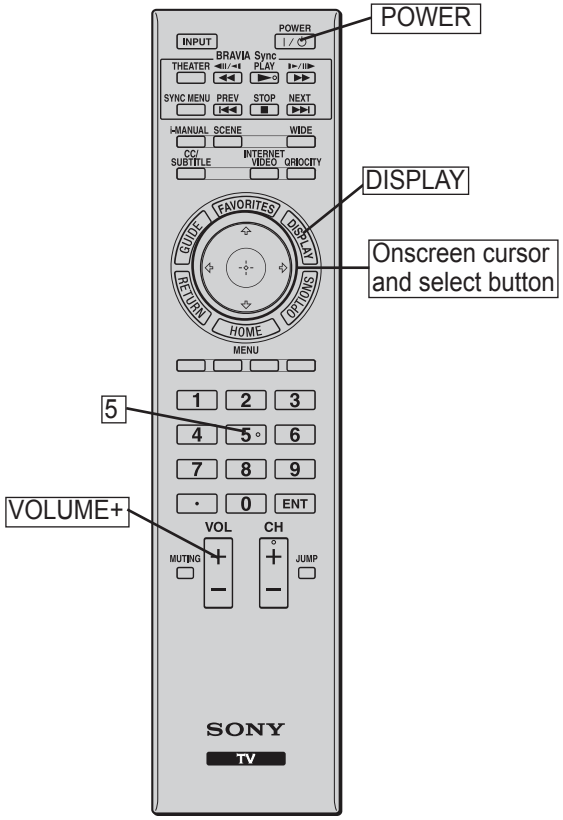
1-487-711-11	REMOTE COMMANDER (RM-YD037) (US MODEL ONLY)
1-487-821-11	REMOTE COMMANDER (RM-YD052) (CND/MX/LA MODELS ONLY)

SEC 2. SERVICE ADJUSTMENTS

2-1. ACCESSING SERVICE ADJUSTMENT MODE

1. TV must be in Standby Mode. (POWER off).
2. Press the following buttons on the Remote Commander within a second of each other:

DISPLAY ➡ Channel **5** ➡ Volume **+** ➡ **POWER**



RM-YD037

```
DIGITAL        SERVICE

001 OP
000 VERS       ---


<MAIN>         <SUB>
DM1.301J00AA   SM1.010W00AA
M2.105C        SB1.000W00AA
DD1.016J00AA   SD1.010W00AA
(DM1301J00AA)  RF01.05
WP00.521J00AA  ID1C117081
ID1C117081     LTY320AB01
PID04020000
WF:2.0.0.99    <BEM>
WF:0B          BM1.012W00LU
Camera FW      BB1.000W00LU
Camera FW      BD1.011J46LUX
               ---.---------
```

Sample Service Menu

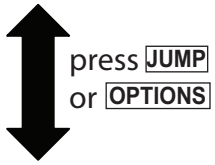
2-1-1. VIEWING THE SERVICE MENUS

Use the Remote Commander to view the **Digital**, **Chassis** and **Sub** Service Menus and their options.

1. To display the **Service Menu** that contains the Category you want to adjust, press **JUMP** or **OPTIONS** on the Remote Commander.

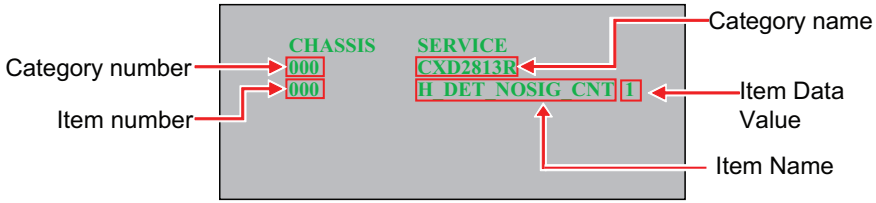
```
DIGITAL          SERVICE

001 OP
000 VERS         ---


<MAIN>           <SUB>
DM1.301J00AA     SM1.010W00AA
M2.105C          SB1.000W00AA
DD1.016J00AA     SD1.010W00AA
(DM13 01J00AA)   RF01.05
WP00.521J00AA    ID1C117081
ID1C117081       LTY320AB01
PID04020000
WF:2.0.0.99      <BEM>
WF:0B            BM1.012W00LU
Camera FW        BB1.000W00LU
Camera FW        BD1.011J46LUX
                 ---.---------
```

Sample Digital Service Menu




```
CHASSIS
000          CXD2813R
000          H_DET_NOSIG_CNT  1
```

Within each Service Menu are Categories and data information.



Sample Chassis Service Menu

2-1-2. USING THE REMOTE COMMANDER TO VIEW OR CHANGE SERVICE DATA

Use the buttons on the Remote Commander to access the Service Menu items and adjust the Data Values.

DISPLAY → Channel **5** → Volume **+** → **POWER**

4. To change the **Category**,
   press 2 to move to the Next Category or
   press 5 to go back to the Previous Category.
   Note: Pressing 2 or 5 only changes the Categories within the Service Menu displayed.

5. To change the **adjustment item**,
   press 1 to move to the Next Item or
   4 to go back to the Previous Item.

6. To change the **Data Value**,
   press 3 to increase the Data Value or
   6 to decrease the Data Value.

7. Press **MUTING** then press 0 to Write the changes.

8. To exit service mode, press **HOME** or turn the TV power off.

2-2. ADJUSTMENTS AFTER REPLACING THE BUHS BOARD OR LCD PANEL

The following procedures must be completed after replacing the BUHS Board or the LCD panel.

- ☑ Update the TV to the latest software version
- ☑ Select the Model
- ☑ Select the Destination
- ☑ Enable Blind Touch Key (BTK) Sensor
- ☑ Verify model and panel information are correct
- ☑ Reconnect all cables

2-2-1. UPDATING THE SOFTWARE

After replacing the BUHS Board or the LCD Panel, you must update the software to the latest version.

Before you begin

- ☑ Disconnect all cables (RF, External input, Ethernet, etc.) from the TV

Instructions for updating the software are included with the software package. After completing the software update, proceed to "Selecting the Model".

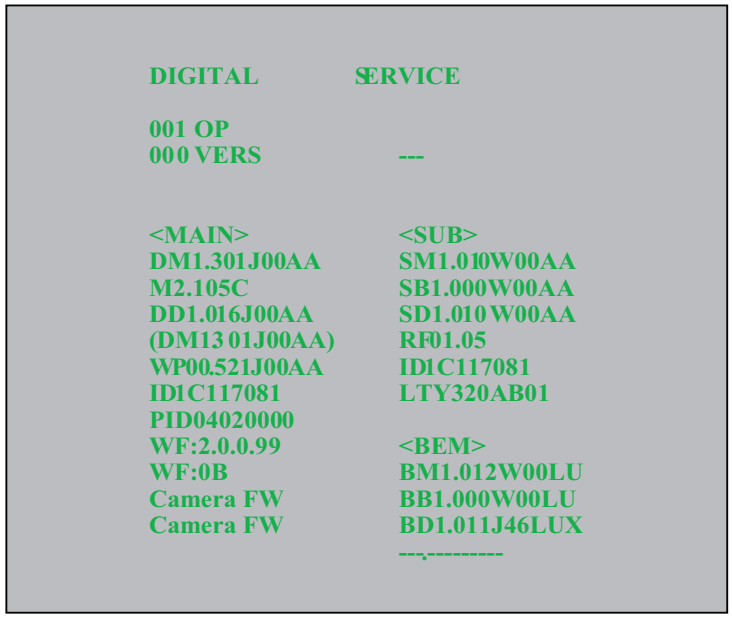
2-2-2. SELECTING THE MODEL

After replacing the BUHS Board or LCD Panel, go into Service Mode to set the Model data value.

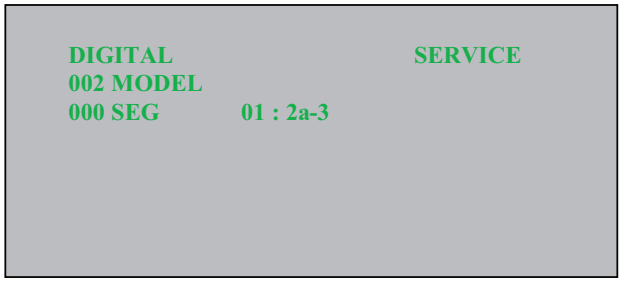
1. TV must be in standby mode. (Power off).
2. Access Service Mode.
   Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel 5 → Volume + → POWER

3. Display the **DIGITAL Service Menu**.
   NOTE: There are 3 Service Menus for this model, DIGITAL, CHASSIS, and SUB. If the DIGITAL Service Menu is not displayed, press JUMP or OPTIONS on the Remote Commander.

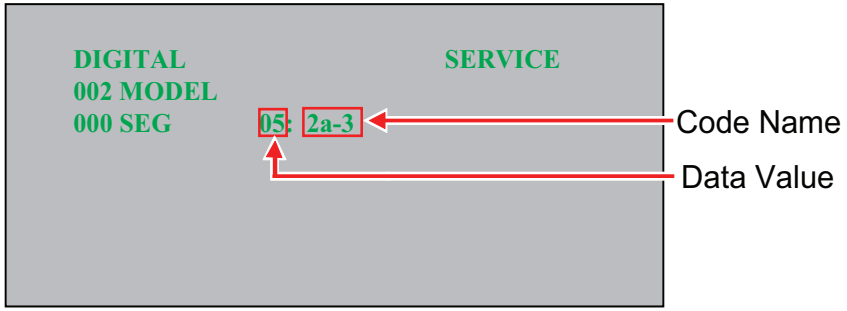


4. Press 2 to move to the **002 MODEL** (Next) category.



5. Using the table, press 3 to increase the data value or 6 to decrease the data value, to match the model of the TV.

Chassis	Model Name	Data Value	Code Name
AZ1-H	KDL-40NX700	05	2a-3
AZ1-H	KDL-46NX700	05	2a-3

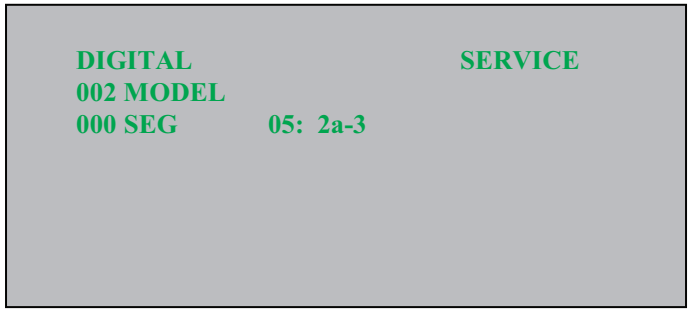


6. Proceed to “Selecting the Destination”.

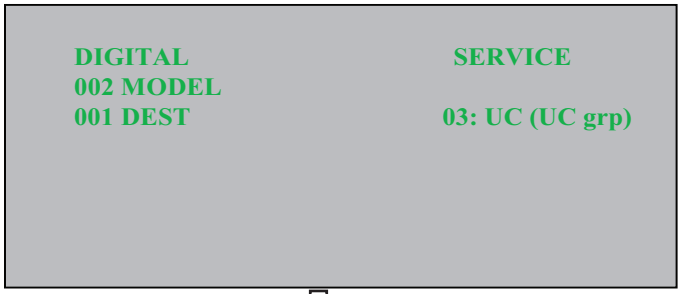
2-2-3. SETTING THE DESTINATION

After replacing the BUHS Board or the LCD Panel, the destination location must be set.

CAUTION: Selecting the incorrect destination may requiring replacing the BUHS Board.

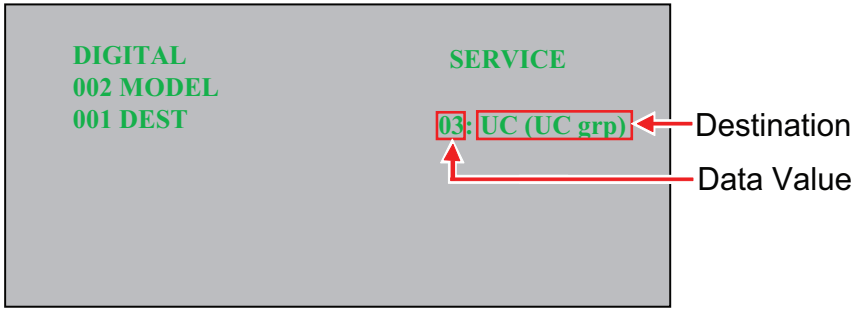


7. Press 1 to move to "**001 DEST**" sub Category.



8. Using the table, press 3 to increase the data value or 6 to decrease the data value, to select the destination of the TV.

GROUP	DESTINATION CODE	DATA VALUE	DESTINATION
UC grp	UC	3	US/CND
	LTN-D	16	MX/LATIN AMERICA



CAUTION: Verify the DESTINATION is set correctly before proceeding to the next step. If another destination Data Value is selected, it may possibly corrupt the software which would require a BUHS Board replacement.

9. After verifying the destination data value displays, press 0 to save (Write) the changes.
10. Exit Service Mode by pressing HOME or turn the TV power off.
11. Proceed to "Verifying the Model and Panel Information".

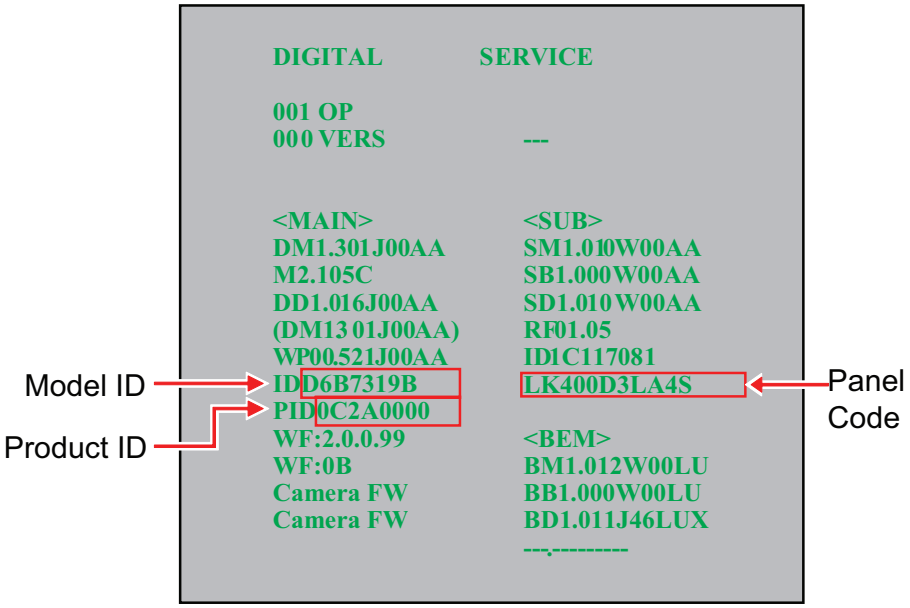
2-2-4. VERIFYING THE MODEL AND PANEL INFORMATION

After saving the changes to the service data, verify the information.

1. TV must be in standby mode. (Power off).
2. Access Service Mode.
   Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel 5 → Volume + → POWER

3. Display the **DIGITAL Service Menu**.
   NOTE: There are 3 Service Menus for this model, DIGITAL, CHASSIS, and SUB. If the DIGITAL Service Menu is not displayed, press JUMP or OPTIONS on the Remote Commander.



4. Using the table, verify the Model ID and the Product ID match the information in the Service Menu.

Model Name	Model ID	Product ID	Panel ID	Code Name
KDL-40NX700	D6B7319B	0C2A0000	LK400D3LA4S	2a-3
KDL-40NX700	D6B7319B	402A0000	LK400D3LA4S	2a-3
KDL-40NX700	D6B7319B	0C2A0000	LK400D3LA4T	2a-3
KDL-40NX700	D6B7319B	402A0000	LK400D3LA4T	2a-3
KDL-40NX700	D6B7318D	0C2A0000	LK400D3LA8S	2a-3
KDL-40NX700	D6B7318D	402A0000	LK400D3LA8S	2a-3
KDL-40NX700	D6B7319B	0C2A0000	LK400D3LEDE120	2a-3
KDL-40NX700	D6B7318D	0C2A0000	LK400D3LEDE240	2a-3
KDL-40NX700	D6B7318D	402A0000	LK400D3LEDE240	2a-3
KDL-46NX700	D6B7319C	0C2A0000	LK460D3LA8S	2a-3
KDL-46NX700	D6B7319C	402A0000	LK460D3LA8S	2a-3
KDL-46NX700	D6B7319C	0C2A0000	LK460D3LA8T	2a-3
KDL-46NX700	D6B7319C	402A0000	LK460D3LA8T	2a-3
KDL-46NX700	D6B7319E	0C2A0000	LK460D3LA9S	2a-3
KDL-46NX700	D6B7319E	402A0000	LK460D3LA9S	2a-3
KDL-46NX700	D6B7319C	0C2A0000	LK460D3LEDE120	2a-3
KDL-46NX700	D6B7319C	402A0000	LK460D3LEDE120	2a-3
KDL-46NX700	D6B7319E	0C2A0000	LK460D3LEDE240	2a-3
KDL-46NX700	D6B7319E	402A0000	LK460D3LEDE240	2a-3

5. Exit Service Mode by pressing HOME or turn the TV power off.
6. Proceed to “Reconnecting All Cables”.

2-2-5. RECONNECTING ALL CABLES

After completing the changes to service mode, reconnect all the cables (RF, External input, Ethernet, etc.) to the TV then verify the TV set picture. If necessary, proceed to "White Balance Adjustments".

2-3. WHITE BALANCE ADJUSTMENTS

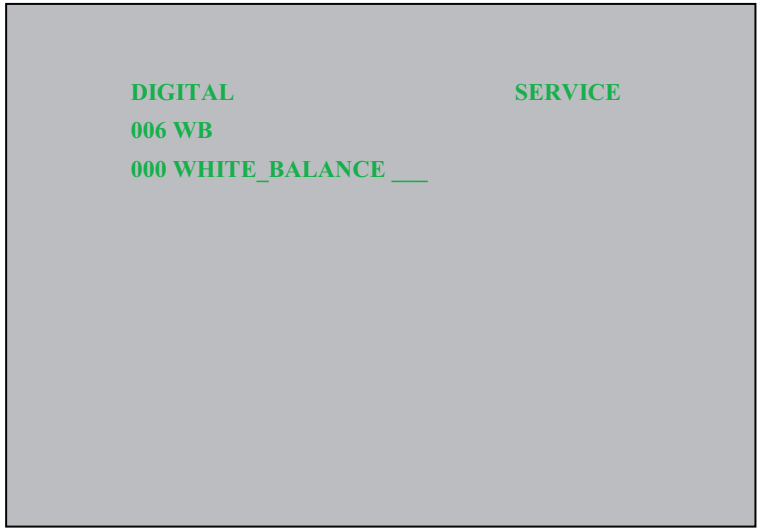
White Balance adjustment data is located on the Digital Service Menu.

1. TV must be in Standby Mode. (POWER off).
2. Press the following buttons on the Remote Commander within a second of each other:

DISPLAY → Channel 5 → Volume + → POWER

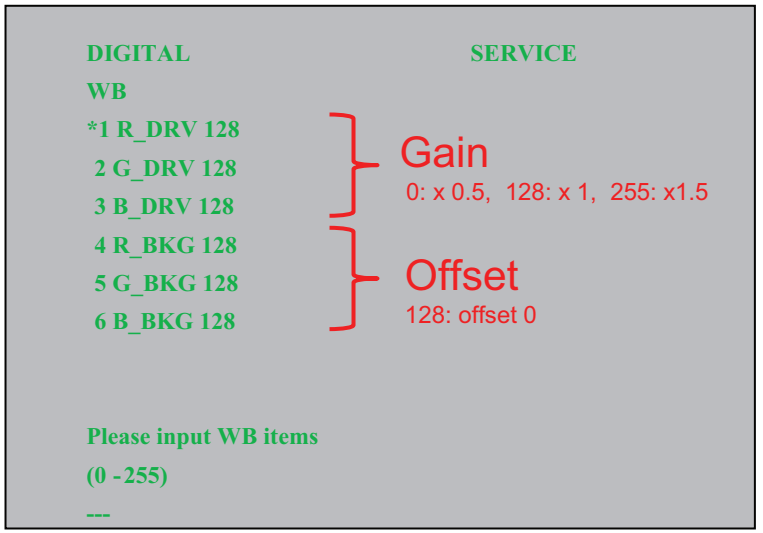
NOTE: If the **Digital Service Menu** is not displayed, press JUMP or OPTIONS.

3 Press 2 to move to "006 WB" Category.



4. Press 0 to enter White Balance Adjustment mode.

5. To select the White Balance Adjustment setting that needs to be changed, do the following:
   a. To select R_DRV, press 1.
   b. To select G_DRV, press 2.
   c. To select B_DRV, press 3.
   d. To select R_BKG, press 4.
   e To select G_BKG, press 5.
   f. To select B_BKG, press 6.
6. After selecting the White Balance setting, press ENT to display the edit screen.
   The screen displays a "Please input WB items" message.



7. Using the numbers buttons on the remote, enter the Data Value for the White Balance setting (value must be between 1 and 255).
8. Press ENT to WRITE (save) the changes.
9. To exit White Balance Adjustment, press JUMP or OPTIONS

2-4. RESETTING THE TV TO FACTORY CONDITION

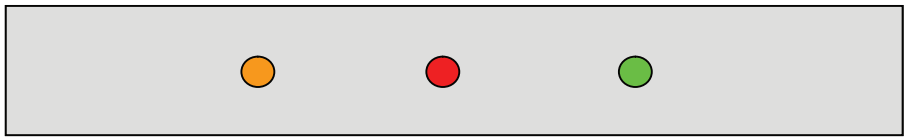
Use the following instructions to restore the User Adjustments and Channel Memory settings to the preset factory conditions.

1. While holding down the ⏏ on the Remote Commander, press the POWER button on the TV Switch Unit of the set.

   The set restarts and displays the Initial Setup screen. This may take several minutes.

2-4-1. RESETTING THE TV TO FACTORY CONDITION USING SERVICE MODE

1. TV must be in Standby Mode. (POWER off).
2. Press the following buttons on the Remote Commander within a second of each other:
   DISPLAY → Channel **5** → Volume **+** → **POWER**.
3. If necessary, press **JUMP** or **OPTIONS** to go to DIGITAL mode.
4. Press **8**.
   "SERVICE" changes to green RST.
5. Press **MUTING**.
   RST executes the command and displays EXE.
6. Press **0** .
   EXE-RST displays green, then red indicating the TV is writing the data.
7. When the process is complete the green SERVICE text displays and the LED display as shown below:

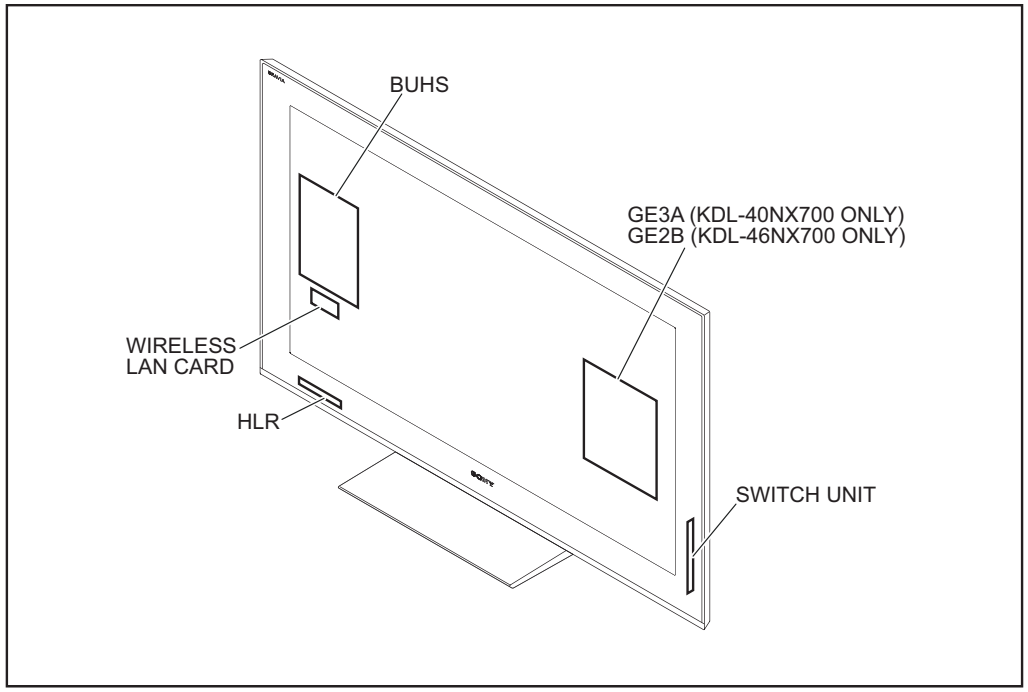


TIMER Standby POWER

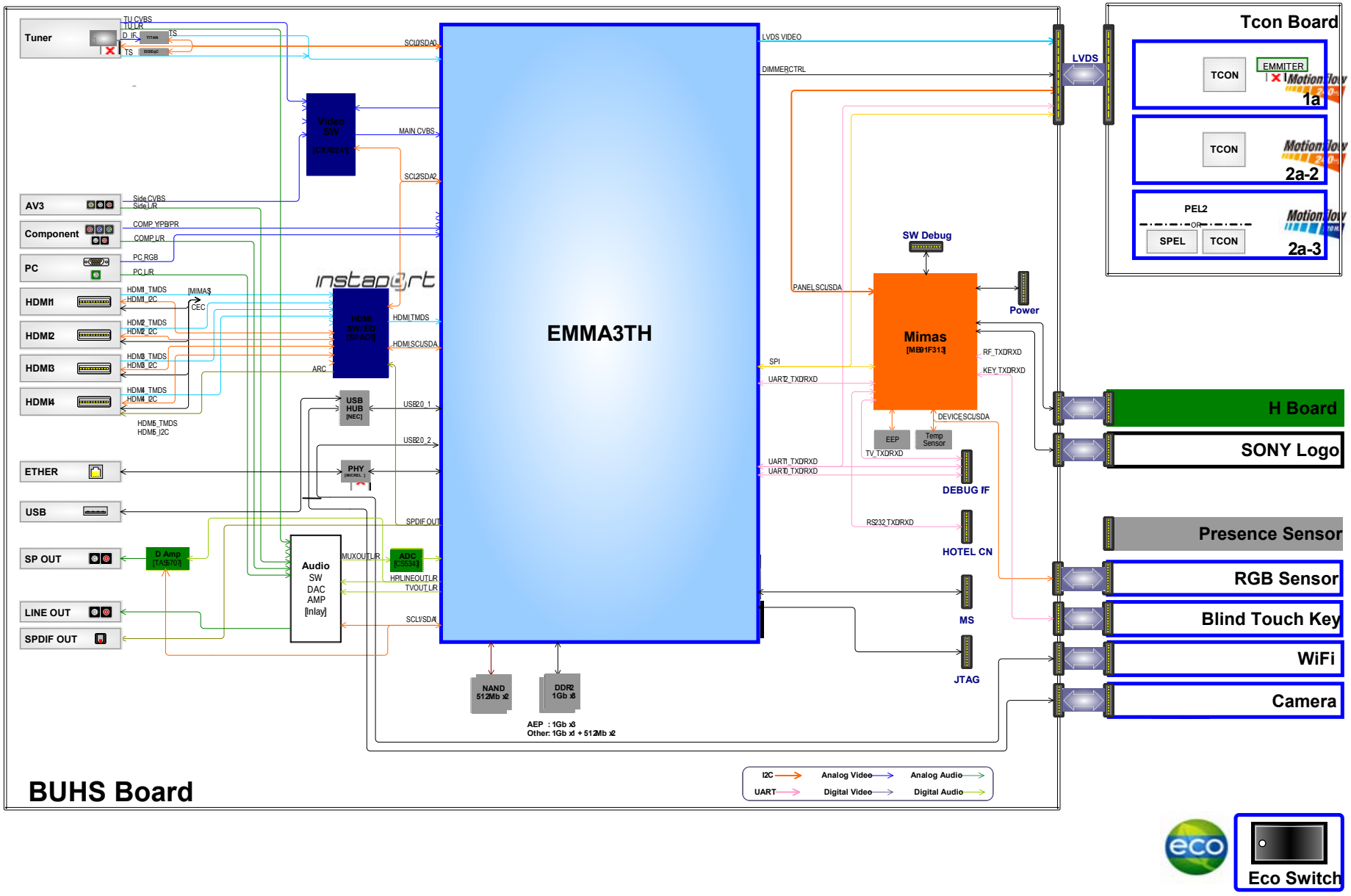
8. Cycle AC Power (Unplug and Plug AC Cord from the AC Outlet).
9. The set restarts and displays the Initial Setup screen. This may take several minutes.

SEC 3. DIAGRAMS

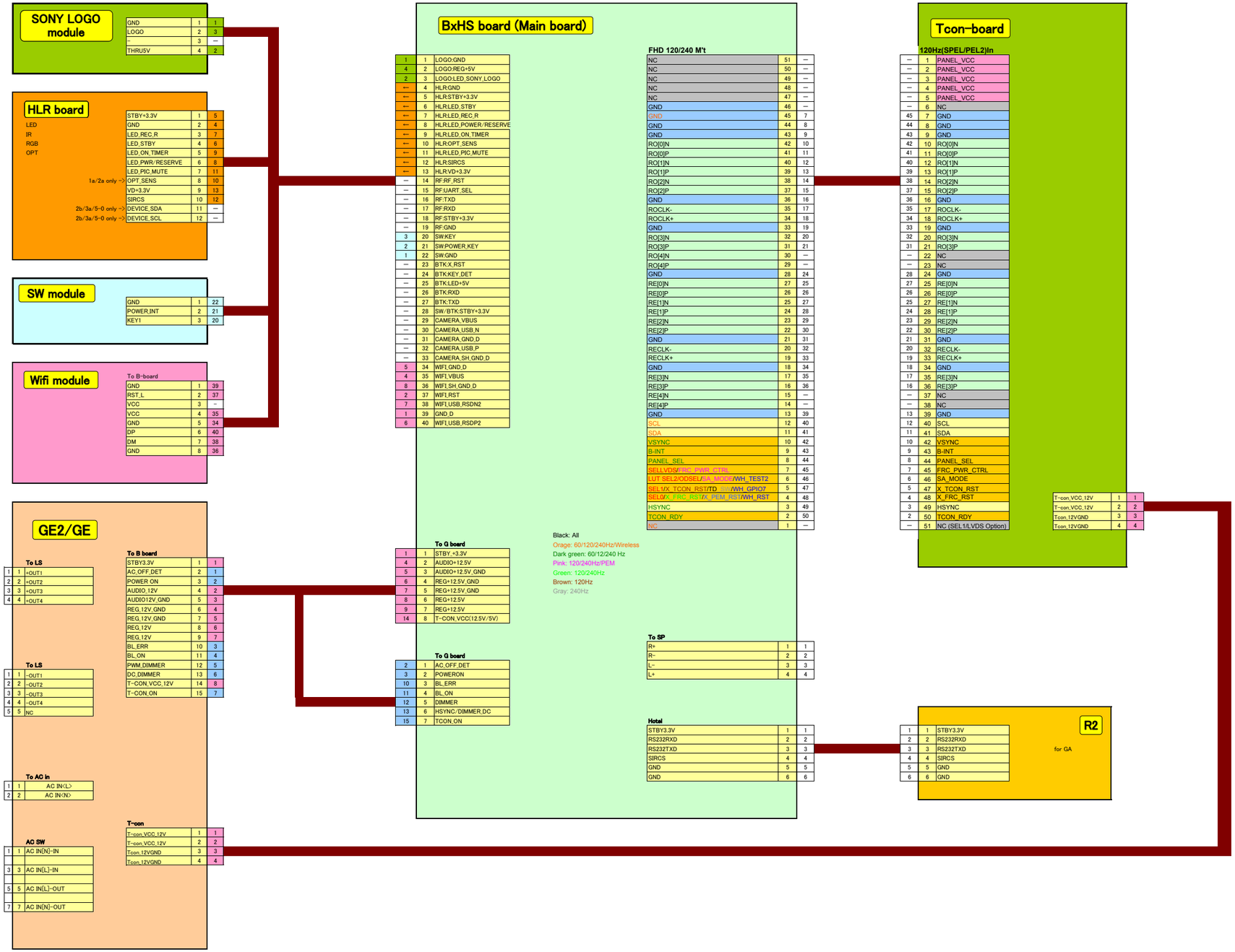
3-1. CIRCUIT BOARDS LOCATION



3-2. BLOCK DIAGRAM



3-3. FRAME DIAGRAM



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